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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,433	09/14/2005	Yoshihide Hayashizaki	1794-0165PUS1	5778
2292 7590 07/02/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER SMITH, JOHNNIE L	
			ART UNIT 2881	PAPER NUMBER
			NOTIFICATION DATE 07/02/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/525,433

Applicant(s)

HAYASHIZAKI ET AL.

Examiner

Johnnie L. Smith II

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 1228, 0224.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,815,673 (Hayashizaki et al)

The applied reference has common inventors with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

3. In reference to claim 1, Hayashizaki teaches a method of analyzing protein using laser ablation in which by irradiating laser beams on protein to be analyzed and ablating the protein, the protein is atomized into constituting elements, the

atomized constituting elements are ionized, and the ionized constituting elements are analyzed, wherein the laser beams that irradiate the protein to be analyzed and ablate the protein are ultra-short pulse laser beams, the ultra-short pulse laser beams are irradiated on a chip having the protein fixed thereon, protein is atomized into constituting element and ionized simultaneously by ablating the protein fixed on the chip by the ultra-short pulse laser beams, and the ionized constituting elements are analyzed (abstract, column 7 lines 30-40).

4. In reference to claims 2-3, Hayashizaki teaches a method of analyzing protein, wherein said chip having the protein fixed thereon is a chip having particular protein fixed thereon in which the particular protein reacted with and bonded a substance having specific bond to the particular protein fixed on the chip; and wherein the substance having specific bond to said particular protein is a molecule having specific bonding characteristic with protein (column 9 lines 55-65).

5. In reference to claims 4-6, Hayashizaki teaches a method of analyzing protein wherein the molecule having specific bonding characteristic with said protein is nucleic acid having specific bond with protein; wherein the substance having specific bond to said particular protein is protein that exerts a specific

bonding action among protein; and wherein the protein that exerts the specific bonding action among said protein is an antibody (column 4 lines 11-14).

6. In reference to claim 7, Hayashizaki teaches a method of analyzing protein wherein the chip having said protein fixed thereon is formed by pouring solution containing protein that reacts with said antibody on a chip having said antibody fixed thereon, allowing protein that reacts with said antibody to react with said antibody, and allowing the protein that reacts with said antibody to bond said antibody (column 2 lines 34-60, column 4 lines 8-36).

7. In reference to claims 8-12, Hayashizaki teaches a method of analyzing protein wherein an element label is attached to the protein fixed on said chip; wherein said element label is a stable isotopic element label; wherein said element label is labeled by using a puromycin derivative; wherein said element label is labeled by a sandwich method; and wherein said element label is directly labeled to protein in a sample (column 3 lines 40-58).

8. In reference to claim 13, Hayashizaki teaches a method of analyzing protein wherein said chip is a multi-channeled chip (column 4 lines 18-19).

9. In reference to claim 14, Hayashizaki teaches a method of analyzing protein wherein a sample containing protein to be analyzed and labeled protein solution, in which a label is attached to the protein to be analyzed, are mixed and

poured on said chip, competitive assay is performed in which a substance having specific bond to particular protein fixed on said chip, said protein to be analyzed, and said labeled protein are bonded competitively, and the particular protein is fixed on said chip (column 2 lines 34-65).

10. In reference to claim 15, Hayashizaki teaches a method of analyzing protein wherein ultra-short pulse laser beams that are irradiated on the protein to be analyzed and ablate the protein has a pulse time width of 10 pico seconds or less and a peak value output of 10 mega watts or more (column 3 lines 59-63).

11. In reference to claim 16, Hayashizaki teaches a method of analyzing protein wherein ultra-short pulse laser beams that are irradiated on the protein to be analyzed and ablate the protein has a pulse time width of 1 femto second or more and a peak value output of 1 giga watt or more and 10 giga watts or less (column 3 line 64- column 4 lines 2).

12. In reference to claim 17, Hayashizaki teaches a method of analyzing protein wherein by moving at least one of the ultra-short pulse laser beams that ablate protein and protein to be analyzed, the ultra-short pulse laser beams that ablate protein ablate the protein to be analyzed without omission and duplication to perform analysis (column 4 lines 20-25).

13. In reference to claim 18, Hayashizaki teaches a method of analyzing protein wherein the analysis of said ionized constituting elements is mass spectrometry by a time-of-flight method (column 4 lines 6-7).

14. In reference to claims 19-20, Hayashizaki teaches a method of analyzing protein wherein substances to be fixed on said chip are fixed as a mixture, solution attached with a different label for a substance that needs to be measured is allowed to react with the mixture, and plural types of substances are detected from the mixture; and wherein a sample is fixed on said chip, antibody to a measuring subject, which has been labeled in plural types, is poured to measure a plurality of substances (column 6 lines 27-38).

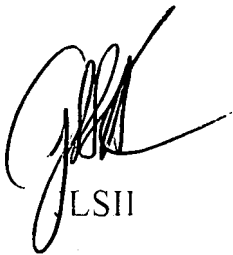
### *Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. All of the references cited on attached PTO 892 contain art similar to that being claimed by applicant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnnie L. Smith II whose telephone number is 571-272-2481. The examiner can normally be reached on Monday-Friday 6-2:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571.272.2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LSII

Johnnie L Smith II  
Examiner  
Art Unit 2881



**ROBERT KIM**  
**SUPERVISORY PATENT EXAMINER**